Swamp, Holly Shelter Game Land, and the Angola Bay Game Land. The vast majority of the Carolina bays also support small to medium sized tracts of peatland habitat.

Other Carolina bays are permanently filled with water, including the large lakes in Bladen County and Lake Waccamaw in Columbus County. Still others, known as clay-based bays, hold water during the winter but dry out during the summer; along with similar ephemeral pools contained within limesink depressions, the temporary pools associated with the clay-based bays are extremely important habitats for amphibians, as well as for many rare plant species.

Hydrology

In addition to the extensive Carolina bays, limesink depressions, and other interbasin wetland habitats just mentioned, the study area contains extensive riparian wetlands and aquatic habitats that contribute to the distinctive biological features of the study area.

Rivers in the Coastal Plain are frequently classified as either brownwater or blackwater. The most prominent river in the region, the Cape Fear, is a classic brownwater river, carrying a rich load of clay and other sediments picked up during its long course across the Piedmont. Although deeply entrenched over much of its course through the region -- reflecting the past history of uplifting in the Cape Fear Arch -- the floodplain and levees along the lower reaches of this river contain some of the richest soils in the entire area. The most diverse bottomland communities found in the study area occur on these sites.

All other rivers in the area belong to the blackwater category. They have their sources in the poor, sandy soils of the Coastal Plain and are characteristically low in mineral sediment and prominently stained by dissolved organic matter (a few of these rivers that drain areas of clayey or loamy sediment have characteristics more similar to brownwater rivers). The study area contains almost all of the large blackwater rivers in North Carolina -- the Waccamaw, Lumber, Black, South, and Northeast Cape Fear, as well as many smaller ones. Although the bottomland communities associated with blackwater rivers do not contain the high biodiversity found along brownwater rivers -- most are dominated by bald cypress and gums -- some of the most distinctive species and community elements found in the region occur within these systems.

Towards the coast, tides are another important hydrological influence. Besides regularly flooding the coastal marshes with salt water, the tides influence water levels in rivers and streams well upstream of where salt water penetrates. Extensive fresh water tidal marshes are present just north of Wilmington, and tidally influenced swamps are present on several rivers in the study area.

Climate and Weather

In addition to geology and hydrology, several aspects of climate and weather shape the biological features of the study area: the range limits of many species are often related to climatic factors,